

REMARKS

Applicant appreciates the courtesies extended by Examiner Dinesh Melwani during an interview on March 23, 2004 with Applicant's representatives, Allan A. Fanucci and Jeffrey A. Wolfson. The comments appearing herein summarize, and are substantially in accord with, those presented and discussed during the interview.

Claims 1-25, as amended, are pending for the Examiner's consideration. The independent claims 1, 23, and 25 have each been amended to clarify that the at least one external facet is polished to a mirror finish (*See, e.g.*, claims 3-4 and 6). Each external facet present can be of a variety of shapes, including flat or curved or combinations thereof. Dependent claim 8 has been amended accordingly to clarify that it is an additional facet that is provided with at least one or more finishes (*See, e.g.*, claims 2-6 each including more than one facet). No new matter is believed to have been added by these amendments, such that the claims are in condition for entry at this time.

As previously discussed, a copy of the first Form PTO-1449 filed August 5, 2003, along with copies of references R and W, and a copy of the second Form PTO-1449 filed February 3, 2004, along with the reference cited therein, are submitted herewith for the Examiner's convenience. Although Applicant submitted copies of all references with each Information Disclosure Statement, the Examiner indicated that these references R and W were unavailable for consideration. Thus, Applicant resubmits a copy of each for complete consideration. As for the second Form PTO-1449, this appears to have crossed in the mail with the Office Action and the Examiner agreed to consider the additional reference that is resubmitted herewith.

Claims 1-7, 10, 14, 16, and 18-19 were rejected for obviousness-type double patenting over U.S. Patent No. 6,062,045. Applicant submits a Terminal Disclaimer, with provision for the required fee, concurrently herewith to obviate this rejection. In view of the Terminal Disclaimer, Applicant respectfully submits that this rejection has been obviated and should be withdrawn.

Claim 3 was objected to for an informality due to an alleged inconsistency between the specification and claims. In particular, the claim recites an angle from 1° to 40°, while the specification is alleged by the Office Action to disclose only 1 to 30°. On the contrary, the 1 to 30 degree range is merely a preferred embodiment. The specification expressly supports a 1° to 40° angle on page 4, lines 27-28 and in original claim 3 (*See also* Specification at page 9, line 11 disclosing a 2° to 40° angle). This support existed through all the parent applications, including now issued U.S. Patent No. 6,062,045. Thus, it is believed

that this objection is in error and Applicant respectfully submits that it should be reconsidered and withdrawn in view of the specification support that is consistent with the claim language.

Claims 1-25 were rejected for obviousness over U.S. Patent No. 5,003,678 to Oganessian ("Oganessian") in view of U.S. Patent No. 3,776,706 to Daniels et al. ("Daniels") on pages 3-5 of the Office Action. Oganessian is stated to disclose an annular jewelry article including an annular body made of a hard material having an external, curved facet ground to a predetermined shape and with the hard material being long wearing and virtually indestructible.

On the contrary, Oganessian fails to teach tungsten carbide, or any other hard material being long wearing and virtually indestructible as presently recited. The Office Action acknowledges this deficiency. In fact, Oganessian teaches ring substrate materials that are soft enough to be drilled (Col. 3, lines 41-66) by conventional groove cutting and drill equipment, and to have the edges pushed inwardly to retain diamonds (Col. 4, lines 23-41). Indeed, Oganessian even states that its rings are formed of a "soft metal" (Col. 4, line 32). The Office Action relies on Daniels to combine the teaching of tungsten carbide in a jewelry article (Col. 1, lines 30-46; Col. 2, lines 45-50; and Col. 4, line 49).

Daniels, however, does not teach tungsten carbide jewelry. In fact, Daniels teaches 25 to 75 volume percent refractory alumina, 25 to 75 volume percent titanium carbide, and 0 to 10 volume percent of a metal, which can include tungsten. Daniels simply fails to disclose or even suggest a jewelry article including tungsten carbide, as presently recited. Moreover, as we understand it, jewelry articles that include tungsten carbide, as presently recited, are significantly harder than Daniels' titanium carbide, such that titanium carbide would not be long wearing and virtually indestructible. Indeed, Daniels Col. 1, lines 30-46 simply discloses unusually "scratch-resistant" materials, but the articles as a whole are stated only to be "very durable as compared to many *natural and artificial stones and gems* used in articles of jewelry" (emphasis added). Thus, the alumina and titanium carbide of Daniels is simply harder than various stones and gems, but Daniels fails to teach a metal that is a hard material comprising tungsten carbide that is long wearing and virtually indestructible, as presently recited. There are many natural and artificial stones and gems that are fairly soft, and therefore, Daniels does not actually teach any materials other than those stated, *e.g.*, titanium carbide. In fact, Daniels does not contain any disclosure that might enable one of ordinary skill in the art to be able to provide jewelry articles formed with at least one external facet and of much harder materials, such as tungsten carbide. As the presently recited tungsten carbide-based articles are harder than titanium carbide-based articles such as

Daniels, Daniels does not teach a long wearing and virtually indestructible jewelry article having an annular body as presently recited.

In fact, Daniels does confirm at Col. 2, lines 45-50 that the optional metal can include elemental tungsten, but Daniels completely fails to teach tungsten carbide, as presently recited. Moreover, this metal is optional in Daniels and can be present in up to 10 volume percent only. Thus, Daniels does not teach to use metals harder than those containing 75 volume percent titanium carbide and 10 volume percent tungsten, for example. Also, Daniels at Col. 4, line 49 does not teach anything regarding tungsten carbide jewelry articles, as stated by the Office Action. On the contrary, Daniels teaches at Col. 6, line 49 that the unusually pleasing metallic luster of Daniels' jewelry articles is *made superior to polished tungsten carbide* materials or conventional polished metals due to the presence of oxides. Clearly, Daniels fails to teach a mirror finish as presently claimed.

Thus, Applicant maintains that Daniels does not disclose, and in fact *teaches away* from, using tungsten carbide in a jewelry article. In view of Daniels, whether taken individually or in combination with Oganessian, one of ordinary skill in the art clearly would not have been motivated to provide jewelry articles containing tungsten carbide, as presently recited.

Furthermore, because Oganessian teaches soft metals that can be easily ground or machined to single or multiple facets using conventional techniques, it cannot provide motivation to include an annular body made of a hard material comprising tungsten carbide, wherein the annular body has at least one external facet that is ground to a predetermined shape, as presently recited. One of ordinary skill in the art would not have been motivated to combine Oganessian with Daniels's titanium materials or any other material that was too hard as it might create problems grinding, polishing, using conventional drilling or groove cutting equipment, and rolling the rims as taught by Oganessian. Indeed, those of ordinary skill in the art would have expected to fail—rather than achieve success—in using a hard material like tungsten carbide in processes or for forming articles as taught by Oganessian, particularly in view of Daniels' teaching away from tungsten carbide because of the undesirable finish Daniels suggests that it would provide if used in jewelry articles. In comparison, Applicant's tungsten carbide rings and other jewelry articles provide a highly reflective mirror-like finish when ground and polished. Additionally, even the improper combination of references fails to teach tungsten carbide or any other "hard material" that is long wearing and virtually indestructible, as presently recited.

Additionally, several dependent claims recite separately patentable features. Claims 4, 8-9, and 17 each recite preferred embodiments where facets are ground, polished, or otherwise formed to provide a long-lasting, surprising and unexpected result that was not previously achievable by jewelry articles predominantly formed of softer metals like metal oxide blends, titanium carbides, and combinations thereof. These claims functionally recite that sufficient tungsten carbide must be included to provide the long-lasting finishes of the claimed jewelry article. Claims 18-19, for example, which recite "consisting essentially of" and exclude the inclusion of softer materials as taught by Daniels, are also clearly patentable in view of the combination of references. Many metal oxides are soft materials that can limit the hardness of the claimed tungsten carbide articles, and these claims exclude such metal oxides in amounts that would undesirably soften the hard material so that it is not long wearing and virtually indestructible during normal use of the jewelry article. Claims 21 and 25 each recite a preferred density, which is achieved using a sufficient amount of tungsten carbide. For the above reasons, Applicant respectfully submits that the rejection under 35 U.S.C. § 103(a) has been overcome and should be reconsidered and withdrawn, because no *prima facie* case of obviousness has been stated.

Accordingly, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner not agree with this position, a telephone or personal interview is requested to resolve any remaining issues and expedite allowance of this application.

Respectfully submitted,

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Date

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